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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,948	08/07/2001	Stefan Wigger	33713W003	9507

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EXAMINER

WILKINS III, HARRY D

ART UNIT PAPER NUMBER

1742

DATE MAILED: 12/24/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/922,948

Applicant(s)

WIGGER ET AL.

Examiner

Harry D Wilkins, III

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5 and 7-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5 and 7-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 8 and 10 are withdrawn in view of the newly discovered reference(s) to the equivalence of methods of applying a coating, such as by slurry (semi-liquid) and "patch" (tape) evidenced by Rafferty et al and Milaniak et al and also reference to the composition of talc. Rejections based on the newly cited reference(s) follow.

Double Patenting

2. Applicant is advised that should claim 9 be found allowable, claim 17 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

3. Applicant is advised that should claim 10 be found allowable, claim 18 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 1742

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 17 recites the limitation "the metallic components" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 3, 7, 9 and 17 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hirooka et al (US 5,330,813).

Hirooka et al teach the invention as claimed. Hirooka et al teach (see col 2, line 34) a patch for preventing carburization that contains (see col 3, lines 32-34) materials such as borax, boron oxide, borosilicic acid, phenylboric acid and water glass and (see col 3, lines 53-54) materials such as talc and magnesia. The patch allows for carburization for a portion of the metal surface to be prevented (see col 2, lines 43-44). Hirooka et al contain several examples where the ratio of the boron compound to the adjuvant (e.g.-talc) is 9:1 (see examples 2 and 5), 4.5:1 (example 7) and 13:1 (example 8).

Regarding claim 3, Hirooka et al teach an example that uses a ratio of 9:1 (examples 2 and 5) and an example that uses 13:1 (example 8).

Regarding claim 7, Hirooka et al teach (see col 3, lines 53-54) talc.

Regarding claims 9 and 17, Hirooka et al teach (see col 3, lines 32-34) boric oxide and borax.

9. Claims 14, 15 and 16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hirooka et al (US 5,330,813).

Hirooka et al anticipate the invention as claimed. Hirooka et al teach carburizing a surface (see col 7, lines 10-12) by first preventing carburization on a portion of the surface by applying a patch of a material containing (col 3, lines 32-34) borax, boron oxide, borosilicic acid, phenylboric acid and water glass and (col 3, lines 53-54) materials such as talc and magnesia. Hirooka et al contain several examples where the ratio of the boron compound to the adjuvant (e.g.-talc) is 9:1 (see examples 2 and 5), 4.5:1 (example 7) and 13:1 (example 8).

Regarding claim 15, Hirooka et al teach (see col 7, line 12) that the carburizing occurs at 950°C.

Regarding claim 16, Hirooka et al teach (see col 9, line 42) that the patch also comprises a resin.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 1742

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 5, 8, 11, 12 and 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirooka et al (US 5,330,813).

The teachings of Hirooka et al are described above.

Hirooka et al do not teach (1) that the ratio of the substance that forms boron glass and the magnesium silicon compound is 10:1 and (2) that the magnesium silicon compound is magnesium trisilicate ($\text{Mg}_2\text{Si}_3\text{O}_8$).

Hirooka et al does teach examples (2 and 5) that have a ratio of 9:1. This ratio is close enough to the presently claimed ratio that one of ordinary skill in the art would have expected it to have the same properties as claimed. See MPEP 2144.05.

Hirooka et al teach using talc (composition $\text{Mg}_3\text{Si}_4\text{O}_{10}(\text{OH})_2$). The compositions and structure of talc and magnesium trisilicate are close enough that one of ordinary skill in the art would have considered them to be functional equivalents. See MPEP 2144.06. No motivation is needed for the substitution of functional equivalents.

Regarding claims 11, 12 and 13, Hirooka et al teach (see col 4, lines 23-28) that the preferred composition contains 40-70 wt% particulate (anti-carburizing compound), such as boron oxide (col 3, lines 32-34) and 60-30 wt% binder resin, and a ratio of anti-carburizing compound to adjuvant of about 9:1. The presently claimed composition is within the broad range disclosed by Hirooka et al. However, it would have been within the expected skill of a routineer in the art to have optimized the composition of the three components within the claimed range in order to best create a coating that prevents carburizing and remains in place during heating (see col 2, lines 44-51).

12. Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirooka et al (US 5,330,813) in view of Milaniak et al (US 5,366,765).

The teachings of Hirooka et al are described above.

Hirooka et al do not teach that the composition is applied as a liquid, semi-liquid or a paste.

Milaniak et al teach several methods of applying a composition of a powder mixed with a binder onto a metal surface. In particular, the invention of Milaniak et al is directed to (see abstract) a method of applying a coating by application of a slurry (i.e.-a semi-liquid).

The "patch" and the slurry of Milaniak et al are considered functional equivalents. The reason that they are considered equivalent is that they both perform the same function of providing a method of coating a metal surface with a powder easily. See MPEP 2144.06. No motivation is needed for the substitution of functional equivalents.

Response to Arguments

13. Applicant's arguments with respect to claims 1, 3, 5 and 7-18 have been considered but are moot in view of the new ground(s) of rejection.

14. The Examiner would like to rebut one argument, in that by example, Hirooka et al do teach the ratio of the "substance which forms boron glass" to the "magnesium-silicon compound" in that the specific examples contain the particulate and adjuvant in ratios of 4.5:1, 9:1 and 13:1. One of ordinary skill in the art would have found that the specific examples would provide guidance for the selection of the ratio for other particulate/adjuvant combinations.

Art Unit: 1742

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rafferty et al teach a method of applying a coating by a tape. "The Mineral Talc" describes the composition of talc.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D Wilkins, III whose telephone number is 703-305-9927. The examiner can normally be reached on M-Th 6:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V King can be reached on 703-308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Harry D Wilkins, III
Examiner
Art Unit 1742

hdw
December 17, 2002

ROY KING 
SUPERVISORY PATENT EXAMINER
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